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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): Song 3

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents P O Box 1450 Alexandria VA 22313-1450" [37 CFR 1.8(a)]

on October 5, 2006

Signature: Tina Maurice

Typed or printed name: Tina Maurice

Application Number	Filed
09/976,731	October 12, 2001

First Named Inventor: Leilei Song

Art Unit	Examiner
2133	Joseph D. Torres

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- [ ] applicant/inventor
- [ ] assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96)
- [X] attorney or agent of record. Registration number 36,597
- [ ] attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Kevin M. Mason
Signature

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Typed or printed name

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Telephone number

October 5, 2006
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

- [ ] *Total of _____ forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): Leilei Song
Case: 3
Serial No.: 09/976,731
Filing Date: October 12, 2001
Group: 2133
Examiner: Joseph D. Torres

I hereby certify that this paper is being deposited on this date with the U.S. Postal Service as first class mail addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Signature: _____ Date: October 5, 2006

Title: Low Complexity and Low Power FEC Supporting High Speed Parallel Decoding of Syndrome-Based FEC Codes

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MEMORANDUM IN SUPPORT OF
PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The present invention and prior art have been summarized in the prior responses.

STATEMENT OF GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The present application was filed on October 12, 2001 with claims 1 through 27. Claims 11-24 and 27 were withdrawn from consideration due to a restriction requirement. Consequently, claims 1-10, 25, and 26 are pending. Claims 1-10, 25, and 26 are rejected under (i) 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement; (ii) 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; and (iii) 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. Claims 1, 2, 7, 8, 25, and 26 are rejected under 35 U.S.C. §102(e) as being anticipated by Noguchi (United States Patent Number 6,611,939 B1), claims 3, 9, and 10 are rejected under 35 USC §103(a) as being unpatentable over Noguchi in view of

Cameron (United States Patent Number 5,099,482 A), and claim 4 is rejected under 35 USC §103(a) as being unpatentable over Noguchi and Cameron, in view of Oh et al. (United States Patent Number 6,256,763 B1). The Examiner has indicated that claims 5 and 6 would be allowable if rewritten in independent form including all of the limitations of the base claims.

Arguments

Section 112 Rejections

Regarding the written description requirement, the Examiner asserts that "nowhere in the specification does the Applicant teach 'wherein said reduced power mode consumes less power in a given interval of time relative to a normal operating mode' and in particular, the Applicant never mentions 'operating mode' much less 'normal operating mode' anywhere in the specification."

Applicant notes that the present disclosure teaches that the reduced power mode consumes less power relative to a normal operating mode on, for example, page 2, lines 9-28, and page 13, line 13, to page 17, line 11. A person of ordinary skill in the art would recognize that power is measured per unit of time. For example, a "watt" is defined as "an International System unit of ***power*** equal to ***one joule per second***." (See, dictionary.com; emphasis added.) Thus, a person of ordinary skill in the art would understand that one mode can "consume less power in a given interval of time" than another mode. Applicant also notes that, in the context of the present invention, a person of ordinary skill in the art would recognize the meaning of the terms "operating mode" and "normal operating mode" and, in light of the present specification, would understand the meaning of the phrase "wherein said reduced power mode consumes less power in a given interval of time relative to a normal operating mode."

The Examiner also asserts that there is nothing in the application that teaches what a normal operating mode is and how it distinguishes itself from the multitude of other modes taught in the specification, and that Applicant does not say what the support is. Applicant notes that a person of ordinary skill in the art would understand the meaning of a normal operating mode and, in light of the present specification, would understand the meaning of the "multitude of other modes," and how the other modes are distinguished from the normal operating mode. In addition, the specification clearly supports the amendment that a reduced

power mode *consumes less power in a given interval of time relative to a normal operating mode.* For example, the present specification teaches that "the power consumption is reduced in an illustrative embodiment by inputting a predetermined logic value into registers of the parallel decoder, which *limits switching power.* Optionally, *clock gating* may also be performed to further reduce power." (Page 2, lines 15-18; emphasis added.) Thus, a reduced power mode *consumes less power in a given interval of time* by, for example, limiting switching power and clock gating, as compared to a normal mode.

Regarding the Examiner's rejection of the cited claims as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, the Examiner asserts that the term "relative to" is a relative term which renders the claims indefinite, and that the cited term is not defined by the claim, that the specification does not provide a standard for ascertaining the requisite degree, and that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Contrary to the Examiner's assertion, the cited claims *are definite* since they specifically recite the two modes (reduced power mode and normal operating mode) and recite how the reduced power mode compares to a normal operating mode, i.e., the reduced power mode *consumes less power in a given interval of time* relative to (than) a normal operating mode.

Regarding the Examiner's rejection of the cited claims as being incomplete for omitting essential steps, such omission amounting to a gap between the steps, the Examiner asserts that the omitted elements are: the relationship between "given interval of time" and "normal operating mode;" and the relationship between "reduced power mode" and "given interval of time."

Applicant notes that the relationships between operational modes (e.g., a normal operating mode and a reduced power mode) and an interval of time are inherent relationships, i.e., each mode inherently operates over an interval of time, and inherently consumes a certain amount of power per unit of time, as would be apparent to a person of ordinary skill in the art.

In this regard, the Examiner asserts that, "if the Applicant believes the language is inherent then the language should be removed from the claim since it fails to add a meaningful limitation." The cited language was added, however, to clarify the meaning of a reduced power

mode in response to the Examiner's previous interpretation of a reduced power mode. Thus, contrary to the Examiner's assertion, the cited claim language adds a meaningful limitation.

Independent Claims 1, 25 and 26

Independent claims 1, 25, and 26 were rejected under 35 U.S.C. §102(e) as being anticipated by Noguchi. In particular, the Examiner asserts that Noguchi teaches performing error correction in a reduced power mode...(...the abstract in Noguchi teaches that error correction is terminated to reduce power consumption). In the Response to Arguments section of the final Office Action dated August 18, 2005, the Examiner asserts that Noguchi teaches "'reducing the power consumption in the error correction processing means' by reducing the number of iterations in the iterative decoding process means."

Applicant notes that, as the Examiner acknowledges, Noguchi teaches that error correction is ***terminated*** to reduce power consumption (see, col. 3, lines 12-25; col. 5, lines 54-62; col. 9, lines 18-40 and 54-60). Noguchi teaches, for example, that,

> further, the clock signal which is supplied to the data error correction device is stopped *during a period after the error correction processing is terminated* when the decoding has been repeated less than the predetermined number of times, till the iterative decoding for the next data is started. Therefore, the power consumption in the data error correction device can be further reduced. (Col. 9, lines 54-60; emphasis added.)

Noguchi teaches to ***terminate*** *error correction and, as a result, reduces the overall power consumption*; the present disclosure teaches to ***perform*** *error correction in a reduced power mode.* The specific language of col. 9, lines 54-60, controls over the general language cited by the Examiner at col. 4, lines 61-67. Thus, a person of ordinary skill in the art would understand Noguchi as teaching to ***terminate*** *error correction to reduce the overall power consumption.* The present disclosure teaches to ***perform*** *error correction in a reduced power mode.* Independent claims 1, 25, and 16 require that the reduced power mode *consumes less power in a given interval of time relative to a normal operating mode.* Support for this limitation can be found on page 2, lines 15-18; page 13, lines 13-17; page 14, lines 12-18; page 15, lines 23-27; and page 21, lines 17-30, of the originally filed specification.

Thus, Noguchi does not disclose or suggest wherein said reduced power mode consumes less power in a given interval of time relative to a normal operating mode, as required

by independent claims 1, 25, and 26.

Additional Cited References

Cameron was also cited by the Examiner for its disclosure of using the particular elements of a decoder for Reed-Solomon codes and how an uncorrectable error is determined from intermediate polynomials. Applicant notes that Cameron is directed to determining whether a received message (Reed-Solomon encoded) is correctable by Euclid's algorithm.

Oh et al. was also cited by the Examiner for its disclosure of the use of the modified Euclidean Algorithm. Applicant notes that Oh is directed to a Reed-Solomon decoder having a polynomial arrangement architecture for realizing a modified Euclidean algorithm and a decoding method. Neither Cameron nor Oh et al. address the issue of performing error correction in a reduced power mode.

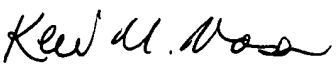
Thus, Cameron and Oh et al., alone or in combination, do not disclose or suggest wherein said reduced power mode consumes less power in a given interval of time relative to a normal operating mode, as required by independent claims 1, 25, and 26.

Conclusion

The rejections of the cited claims under section 102 and 103 in view of Noguchi, Cameron, and Oh et al., alone or in any combination, are therefore believed to be improper and should be withdrawn. The remaining rejected dependent claims are believed allowable for at least the reasons identified above with respect to the independent claims.

The Examiner's attention to this matter is appreciated.

Respectfully,



Date: October 5, 2006

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